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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/517,901 | 12/10/2004 | Frederick L Jordan | HO-P03088US2 | 6893 |

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| EXAMINER |
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MCAVOY, ELLEN M

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| ART UNIT | PAPER NUMBER |
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1771

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01/31/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

nstacey@fulbright.com
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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/517,901 | Applicant(s) JORDAN, FREDERICK L | |
| | Examiner Ellen M. McAvoy | Art Unit 1771 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,8,10,12,14,17-23 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,8,10,12,14,17-23 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 October 2010 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8, 10, 12, 14, 17-23 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan (5,826,369) in combination with Reid (4,981,495) or Reid (4,941,968).

Applicant's arguments filed 21 October 2010 have been fully considered but they are not persuasive. As previously set forth, Jordan discloses a fuel additive which acts to enhance the combustion characteristics of carbonaceous fuels which comprises beta-carotene, chlorophyll, jojoba oil and ethoxylated castor oil. Jordan teaches that the additive may be diluted with a suitable solvent including gasoline, diesel fuels, xylene, toluene, cyclic hydrocarbons and other liquids including most any organic solvent. Jordan teaches that cetane boosters such as alkyl nitrates which include 2-ethylhexyl nitrate and mixed octyl nitrate may be added to the fuel composition. See column 1, line 66 to column 3, line 21. Applicant's invention differs by

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adding 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline which acts as a stabilizing compound to the beta-carotene component in the fuel additive. However, as evidenced by the Reid references, the oxidative stability of hydrocarbon fuels including gasoline and diesel fuels is improved by adding an alkyl 1,2-dihydroquinoline compound. Reid discloses that suitable quinoline compounds include 6-ethoxy-2,2,4-trimethyl-1,2-dihydroquinoline. See formula IV in column 3 of Reid ('369) and in column 4 of Reid ('968). The Reid references teach that the alkyl 1,2-dihydroquinoline compounds may be added to gasoline and other fuels in an amount of 1 to 10,000 parts based upon one million parts gasoline, which converts to 0.000001 to 0.01 times 100 (to result in percent) is 0.0001 to 1.0 %. See column 4, lines 7-25 of ('495). Having the prior art references before the inventor at the time the invention was made it would have been obvious to have added a known fuel stabilizing compound to the fuel composition of Jordan if its imparted properties were so desired.

Response to Arguments

In response applicant argued that independent claims 1, 2 and 34 are directed toward "A fuel additive", and that the fuel additive of Jordan is made of 100% beta-carotene, chlorophyll, jojoba oil and/or ethoxylated castor oil. Applicant argued that nowhere in Jordan does it teach beta-carotene plus a compound like 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline. Applicant argued that there is no teaching, suggestion or motivation for one of ordinary skill in the art to combine 100% alkyl 1,2-dihydroquinoline compounds, dimers, trimers or polymers thereof, of the Reid references, with the 100% beta-carotene, chlorophyll, jojoba oil and/or ethoxylated castor oil of Jordan, to arrive at an additive that comprises beta-carotene and 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline. This is not deemed to be persuasive because applicant's

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independent claims use the open-ended claim language “comprising” which allows for the addition of other additives to the claimed “fuel additive”. As set forth above, beta-carotene and 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline are known fuel additives, particularly gasoline additives. The examiner maintains that it would have been obvious to the skilled artisan to have combined two known gasoline additives together on one gasoline additive composition. As set forth in MPEP 2144.06, it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... “The idea of combining them flows logically from their having been individually taught in the prior art.” In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

As previously set forth, independent claims 1 and 20 recite the limitation that “a ratio of grams of beta-carotene to grams of 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline in the additive is from about 20:1 to about 1:1”, and independent claims 2 and 21 recite the limitation that “a ratio of a first additive to grams of a stabilizing compound in the additive is from about 20:1 to about 1:1”, which, applicant argued, is not taught or suggested in the prior art references to Jordan and Reid. Applicant argued that the Reid references teach alkyl 1,2-dihydroquinoline in an amount of 1 to 10,000 parts per million (ppm) of gasoline, and the Jordan reference discloses a weight per volume percent. Applicant argued that it is not possible to infer or deduce the mass and molar composition of gasoline which is needed for the skilled artisan to calculate the weight to weight ratio. Applicant argued that the Reid reference and the Jordan reference cannot be combined to arrive at the present invention. This is not deemed to be persuasive. As set forth above, the Reid references disclose that 6-ethoxy-2,2,4-trimethyl-1,2-dihydroquinoline may be

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added to gasoline where it functions as a stabilizer. Applicant's invention discloses that 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline may be added to gasoline where it functions as a stabilizer. The examiner maintains the position that it would have been obvious to the skilled petroleum chemist to have added a conventional gasoline stabilizer to the gasoline composition disclosed in Jordan if it's known imparted property was so desired. Although the units (ppm vs. grams) of addition may differ, the examiner maintains that it has not been persuasively demonstrated/argued that the amount of 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline stabilizer added to the instant claims differs from that which is taught in the prior art to Reid.

Conclusion

This is a RCE of applicant's earlier Application No. 10/517,901. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however,

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event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ellen M McAvoy/
Primary Examiner
Art Unit 1771

EMcAvoy
January 25, 2011